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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,099	09/20/2001	Makoto Hasegawa	TAKIT 162	4362

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EXAMINER

GRENDZYNSKI, MICHAEL E

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-2

Office Action Summary	Application No. 09/937,099	Applicant(s) HASEGAWA ET AL.	
	Examiner Michael E. Grendzynski	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2 & 6</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II (claims 2-7) in Paper No. 5 is acknowledged. The traversal is on the ground(s) that lack of unity is improper since the claims of Group II depend from claim

1. This is not found persuasive. MPEP § 1850 states, in part, that

If the independent claims avoid the prior art and satisfy the requirement of unity of invention, no problem of lack of unity arises If, however, an independent claim does not avoid the prior art, then the question whether there is an inventive link between all the claims dependent on that claim needs to be carefully considered. If there is no link remaining, an objection of lack of unity (that is, arising only after assessment of the prior art) may be raised. Similar considerations apply in the case of a genus/species or combination/subcombination situation.

Consequently, if the independent claim does not avoid the prior art--as is the case with the instant application--lack of unity must be considered. If the special technical feature does not define a contribution over the prior art, then the claims lack unity. Applicants further argue that "merely alleging" that the special technical feature does not define a contribution over the prior art does not establish that the feature does not, in fact, define a contribution over the prior art. Examiner agrees. Kiyoshi, however, discloses a substrate that is coated with an additive comprising a resin obtained by the reaction of at least a secondary amine, ammonia, and an epihalohydrin. Nakao et al., furthermore, teaches that an epihalohydrin such as epichlorohydrin may be cross-linked in order to improve the water resistance of the polymer, and that this cross-linking is obtained via a cross-linking agent. It would be obvious to one of ordinary skill in the art at the time of the invention to use a cross-linking agent in the reaction mixture of Kiyoshi, motivated by the desire of improving the water resistance of the polymer. *See* rejection under 35 U.S.C. 103(a), below. Since these references evidence that the special technical feature does not define a contribution over the prior art, a lack of unity results.

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Finally, applicants argue that no the Office has not established that an undue burden would be imposed if both inventions were examined. Undue burden, however, is not an appropriate inquiry under lack of unity. *See* 37 CFR 1.475.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

2. The information disclosure statements filed on 11/23/2001 and 3/11/03 (Paper Nos. 2 and 6) have been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyoshi (JP 10-152544) (Translation provided) in view of Nakao (US 5683784). Applicants claim an ink jet medium comprising (1) a substrate and (2) an additive in or on the substrate, wherein the additive is a resin obtained by the reaction of at least a secondary amine, ammonia, an epihalohydrin and a cross-linking agent. Kiyoshi discloses an additive for ink jet recording paper comprising a cationic epihalohydrin resin. *See* Abstract. The resin is obtained by reacting an amine, ammonia and an epihalohydrin. *Id.* This resin is then coated onto a base paper. *See* Abstract and Translation at ¶ 2. Kiyoshi, however, does not disclose the addition of a cross-linking agent to the reaction mixture. Nakao teaches that using a cross-linking agent (e.g., a melamine resin) to cross-link an epihalohydrin resin such as epichlorohydrin resin in

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an ink-receptive layer improves the water resistance of the resin and, in turn, of the layer. *See* col. 3, ll 23-41. It would have been obvious to one of ordinary skill in the art at the time of the invention to cross-link the epihalohydrin resin of Kiyoshi by adding a cross-linking agent to the mixture, motivated by the desire of improving the water resistance of the resulting resin and of the resulting layer, as taught by Nakao on col. 3, ll 23-41.

With regard to claim 3, applicants further claim that the medium is formed by providing an ink absorption layer comprising the additive. Kiyoshi discloses that its additive is placed in an ink-receptive coating composition (i.e., a composition comprising a binder, a filler and other additives) which, in turn, is placed on base paper. *See* Translation at ¶¶ 54-62.

With regard to claim 4, applicants further claim the substrate comprises either (1) ordinary paper or (2) a coated paper including a layer suitable for water-based ink recording. Kiyoshi discloses that its base comprises paper. *See* Translation at ¶ 58. This is equivalent to applicants' ordinary paper substrate.

With regard to claims 5 & 7, applicants further claim that medium of claim 4 is formed by impregnating the ordinary or coated paper with a solution comprising the resin (claim 5) and that the resin is contained in the paper (claim 7). Kiyoshi discloses that its medium is formed using the identical process as applicants (e.g., coating ordinary paper using a size press). *See* Translation at ¶ 62 and Specification Example 1 (both disclosing applying the additive-containing composition using a size press). Consequently, the resin of Kiyoshi would be expected to impregnate the paper and, furthermore, be contained in the paper.

5. With regard to claim 6, applicants further claim the ordinary or coated paper is manufactured from a pulp slurry containing the additive. Kiyoshi discloses that its additive may be added to a paper pulp slurry. *See* Translation at ¶ 58. In addition, "even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim

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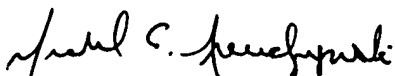
is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 227 USPQ 964, 966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art--as is the case here--although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP §2113.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Grendzynski whose telephone number is 703-305-0593. The examiner can normally be reached on weekdays, from 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2351.



Michael E. Grendzynski
Assistant Examiner
April 7, 2003